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ceous plants seem addicted to these irregularities. It was not unusual to find several young seedling plants spring from one orange seed.

JUNE 11.

The President, Dr. RUSCHENBERGER, in the chair.

Twenty-five members present.

Prof. COPE offered some remarks on the discoveries recently made by Prof. Marsh as to the structure and characters of the *Pythonomorpha*, based especially on material recently obtained by him in Kansas. As the writer had recently passed in review much similar material, he was much interested in Prof. Marsh's conclusions. These, he said, were of importance. In the first place, he had ascertained that what was formerly supposed to be the inner side of the quadrate bone was the outer side, a conclusion Prof. Cope thought entirely consistent with the other known relations of the parts.

Secondly. He had discovered the stapes, and had entirely confirmed the opinion of the speaker, which Prof. Marsh had apparently overlooked. This was stated as follows: 'the quadrate "is characterized by the presence of an oval pit. . . . Its use is uncertain, but there is some probability that it received the extremity of an osseous or cartilaginous styloid stapes. A groove on the under side of the suspensorium would accommodate such a rod, and in a position nearly similar to that which it occupies in many of the Ophidia." It is in precisely this position that Prof. Marsh is so fortunate as to have discovered it.

Thirdly. Prof. Marsh believes that he has found the columella. I have supposed it to be wanting, from the absence of its usual points of attachment on the parietal and pterygoid bones. It remains to compare the bone found by Prof. Marsh with ali- and orbito-sphenoid and ethmoid ossifications found in many saurians.

Fourthly. Prof. Marsh has observed the parieto-quadrate arch described by the speaker, and makes the interesting observation that it is formed of three elements, the median connecting the parietal with the opisthotic. This piece, he says, is "apparently the squamosal;" as the latter bone completes the zygomatic arch, it cannot occupy a position in the parieto-squamosal, unless it sends a branch in that direction.

Fifthly. He discovers the malar arch, proving it to be incomplete and supported by the postfrontal bone. Prof. Marsh also observes an ossification in the glenoid cavity of the opisthotic, which he regards as the pterotic (of "Huxley," which should be

¹ Trans. Amer. Philos. Soc., 1869, p. 180.

Parker), an identification which cannot probably be maintained. The connections of the pterotic, where present, are very different. The bone in question is present in *Edestosaurus tortor*, Cope.

Sixthly. Prof. Marsh completes almost entirely our knowledge of the anterior limbs. The previous descriptions of these members in *Clidastes propython*, Cope, *Holcodus ictericus*, Cope, and other species, had left the number of phalanges and their relative positions, as well as those of the carpals, uncertain; these points are now happily supplied by Prof. Marsh's important researches.

Seventhly. He has done much for the pelvic arch and hind limbs. He was the first to announce the existence of both, and actually described the pelvis of *Edestosaurus dispar*; the speaker, however, first described the hind limb in *Liodon crassartus* and *L. dyspelor*, Cope. Prof. Marsh is in error when he says the "absence of these extremities in the *Pythonomorpha* was considered satisfactorily established." I had never stated that they were certainly absent, and the last time I wrote observed that this order "possessed an anterior pair only, or with the posterior pair so reduced as to have been insignificant." They appear, according to Marsh, to have been relatively small in some of the genera. In *Liodon dyspelor*, Cope, the anterior are the smaller. Prof. Marsh lays students under especial obligation for his determinations of the pelvic elements and the excellent figures of all the parts connected with the support of the hind limb. His figure of the fore limb is also highly important, as it will be difficult soon to duplicate his beautifully complete specimen.

In subsequent pages there are six additional species described, bringing up the number from the Kansas Cretaceous to twenty-three. Two new genera are proposed, viz., *Lestosaurus* for those previously referred by myself to *Holcodus*, Gibbes, and *Rhinosaurs* for species allied or belonging to *Liodon*. As to the former, it is no doubt a well-marked genus, and I am willing to believe Prof. Marsh's opinion, that it will not include Gibbes' *Holcodus acutidens*, will turn out to be well founded; but there is, on the other hand, insufficient evidence to show that it is not *Platecarpus*, Cope. If *Liodon curtirostris* be referred to it, it will very probably prove to be *Platecarpus*, as that species presents palatine teeth, much as in *P. tympaniticus*, and the pleurodont character is not wanting in some of the other species. *Rhinosaurs* includes such species as *Liodon proriger*, Cope. As the name has been used two or three times before, it may be altered to *Rhamphosaurus*, but I have always had doubts that the conic projecting snout would distinguish the species generically from the true *Liodon*, with which it agrees in dentition. The type of *Liodon*, *L. anceps* ord., is, however, very little known.

¹ Hayden, Geol. Survey of Wyoming, etc., 1870, p. 385.

Remarks on Mastodon from New Mexico.—Prof. LEIDY directed attention to portions of a lower jaw of Mastodon recently received for examination from the Smithsonian Institution. The specimens were from New Mexico, and were presented to the latter by the Hon. W. F. M. Arny. One of the specimens contains a molar resembling that from California, described before the Academy, and supposed to belong to *Mastodon obscurus*, which was originally named from a tooth said to have been derived from the miocene formation of Maryland. The other fragment is part of the symphysial prolongation of the jaw containing portions of tusks. This resembles in its form and proportions the corresponding part of the European *Mastodon angustidens*. These and other specimens, including the portion of an upper tusk, having a band of enamel, from California, described before the Academy under the name of *Mastodon Sheppardi*, lead to the inference, that a species resembling *Mastodon angustidens*, inhabited North America during the middle tertiary period. The late Dr. Falconer states that he saw at Genoa the cast of a lower jaw of a Mastodon from Mexico, with an enormous beak containing a large lower incisor. The animal to which it belonged was named *Rhynchotherium*. This perhaps may be the same as the species named *Mastodon obscurus*. A full description of the New Mexican and Californian fossils, with plates, will shortly be given.

JUNE 18.

The President, Dr. RUSCHENBERGER, in the chair.

Twenty-three members present.

The death of Dr. Wm. Stimpson was announced.

JUNE 25.

The President, Dr. RUSCHENBERGER, in the chair.

Sixteen members present.

The death of John Farnum, Maj. Sydney S. Lyon, John G. Moore, and T. Clarkson Taylor, was announced.

On favorable report of Committees, the following papers were ordered to be printed :—